Sow, Grow and Farm

Farming in the UK

Farming is the business of growing crops and rearing livestock. Up to 70% of the land in the UK is used for farming. There are three main types of farming in the UK. These are arable, pastoral and mixed.

Arable farming is growing crops, such as cereals and vegetables.

Pastoral farming is rearing animals, such as cows and sheep.

Mixed farming is both growing crops and rearing animals.

The type of farming depends on the climate, the quality of the soil and the topography of the area. For example, the flat, nutrient-rich land in the east of England is perfect for arable farming, whereas the wet and windy hills of central Wales are most suited to pastoral sheep farming.

Climate zones

The world is divided into five main climate zones. These are areas of similar average temperature and average rainfall. Mountains have variable climates depending on altitude.

The **polar zone** is cold and dry with long, dark winters. Average temperatures are 10°C to -55°C.

The **temperate zone** has warm summers, cool winters and year-round rainfall. Average temperatures are 0°C to 20°C.

The **Mediterranean zone** has hot summers and mild, rainy winters. Average temperatures are 15°C to 30°C.

The **desert zone** is hot year-round and has very little rainfall. Average temperatures are 25°C to 40°C.

The **tropical zone** has a wet season and a dry season. It is hot and humid. The average temperature is around 31°C.

Mountains have changeable climates with colder temperatures and more rainfall as the elevation increases.

Food miles

Consumers in the UK have come to expect that they can buy most foods all year round, regardless of the growing season. This means that some foods are transported from where they are grown to where they are eaten. The distances food travels is known as food miles. However, this movement of goods means more energy is being used to transport the food and keep it fresh, which can add to pollution and contribute to climate change.

Glossary

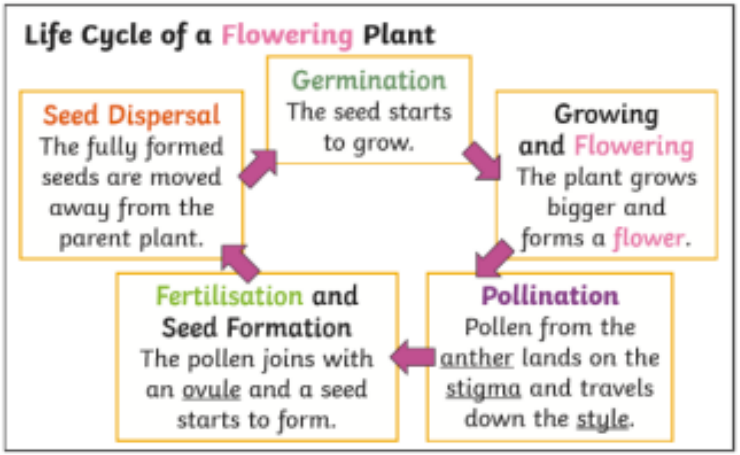
carpel	The female part of a flower, consisting of the stigma, style, ovary and ovules.
climate	The general weather conditions found in a place over a period of time.
fertiliser	A natural or chemical substance that is spread on the land or given to plants to make them grow successfully.
irrigation	The practice of supplying land with water so that crops and plants will grow.
livestock	Animals and birds that are kept on a farm, such as cows, sheep or chickens.
pesticide	A chemical substance used to kill animals and plants that are harmful to crops.
stamen	The male part of a flower, consisting of a thin stem, called the filament, and the anther that is covered with pollen.

What is the lifecycle of a flowering plant?

Flowering plants have lifecycles like all other living things — including us!

A flowering plant will begin life as a seed — the roots and shoot will then begin to grow. We call this germination. The plant will then grow and produce flowers. Pollination happens next so that seeds can be produced and fertilised.

The plant will then disperse the seeds so that new plants can grow.



The Life Cycle of Plants

Specific Vocabulary & definitions (meanings)	
roots	These anchor the plant into the ground and absorb water and nutrients from the soil.
stem	This holds the plant up and carries water and nutrients from the soil to the leaves. A trunk is the stem of a tree.
flower / petals	These make seeds to grow into new plants. Their petals attract pollinators to the plant.
leaves	These make food for the plant using sunlight and carbon dioxide from the air
oxygen	Oxygen is used by animals and plants in the respiration (breathing) process.
germination	When a seed starts to grow.
pollination	When pollen (a fine powdery substance produced by a flowering plant) is moved from the male anther of a flower to the female stigma.
pollinator	Animals or insects which carry pollen between plants. Examples include birds, bees and bats.
nutrients	These substances are needed by a living things to grow and survive. Plants get nutrients from the soil and also make their own food in their leaves.
photosynthesis carbon-dioxide	Photosynthesis is a chemical reaction that takes place in the leaves of a plant, producing food for the plant to survive. Carbon dioxide, water and light are all needed for photosynthesis to take place.
fertilisation	When the male and female parts of the flower have mixed in order to make seeds for new plants.
seed dispersal	A method of moving the seeds away from the parent plant so that the seeds have the best chance of survival.
carpel	The female parts of the flower. Made up of the stigma, style and ovary. The job of the style is to hold up the stigma. The stigma collects the pollen when a pollinator brushes by it. The ovary contains the ovules, which are the part of the flower that gets fertilised and eventually becomes the new seed
stamen	The male parts of the flower. The stamen is made up of the anther and the filament. The filament's job is to hold up the anther. The job of the anther is to make the pollen.

What is seed dispersal?

Once seeds have been made, they need to be dispersed so that new plants can grow. Seed dispersal makes sure that the new plants are growing away from the parent plant so that they are not competing for water, sunlight and other nutrients. Some types of seed dispersal will move the new plant a long way away from the parent plant. They can be dispersed in four different ways: wind, water, animals and explosion.

How are seeds dispersed?

Seeds from plants like dandelions are specially designed so that they can be carried long distances by the wind. Another example is the seed of a sycamore tree.

Coconuts are seeds from palm trees and seeds like this are specially designed so that they can float on water to new places. Another example is the seed of a waterlily plant.

Animals help with seed dispersal in different ways. When they eat seeds, they pass through them and are excreted in new places. Also some seeds are designed to stick to animals so they can be carried to new places.

Some plants can burst their seed pods when they are ready to and throw their own seeds to new locations. An example of this is a pea pod.